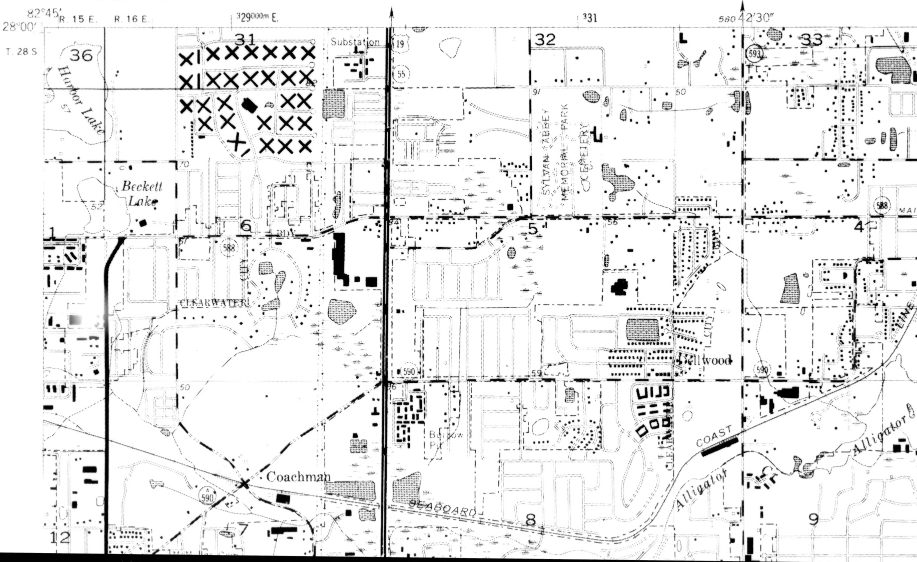
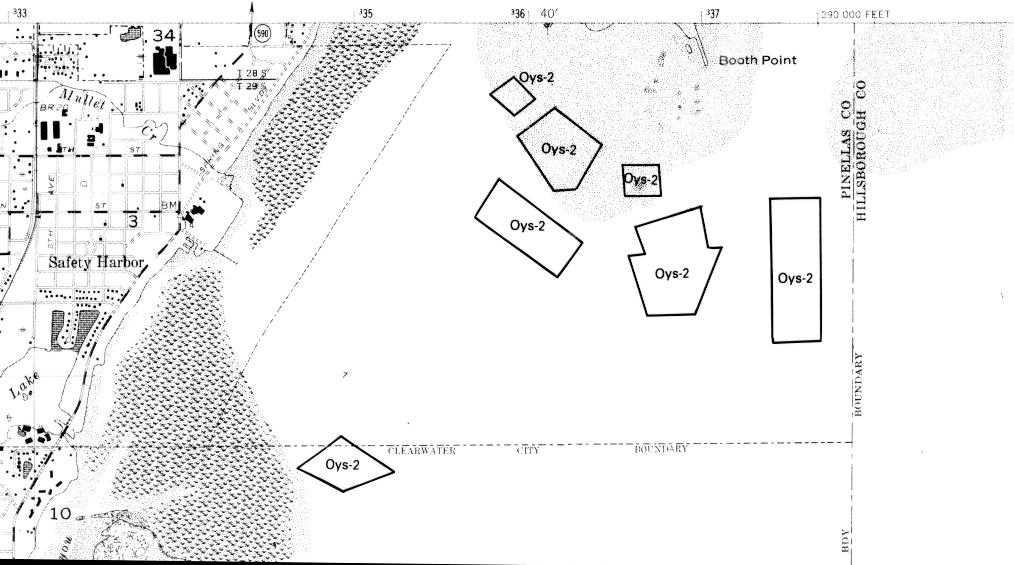
I49.89/2:85(15)map A5

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY


82°45′
28°00′
R. 15 E.
R. 16 E.
329000m E.
331
580
42′30″
T. 28 S
36
Harbor Lake
31
Substation
19
55
32
33
593
Beckett Lake
SYLVAN ABBEY MEMORIAL PARK
CEMETERY
588
6
5
4
MAIN
CLEARWATER
CITY
Bellwood
590
LINE
Borrow Pit
COAST
Alligator
Coachman
590
SEABOARD
8
9
7
12

SAFE

7.5 M

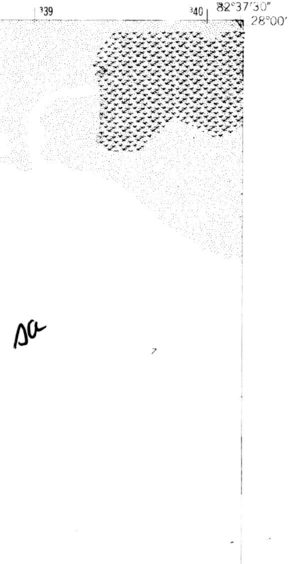


333
335
336
40′
337
290 000 FEET
34
590
T 28 S
T 29 S
Mullet
Cr
BR 20
ST
ST
AVE
5TH
BM
3
14
SPRING
BLVD
Safety Harbor
Lake
5
10
Booth Point
Oys-2
Oys-2
Oys-2
Oys-2
Oys-2
Oys-2
Oys-2
Oys-2
PINELLAS CO
HILLSBOROUGH CO
BOUNDARY
BDY
CLEARWATER
CITY
BOUNDARY

MAY 19 '8

I49.89/2:85(15)map

TY HARBOR QUADRANGLE
FLORIDA
INUTE SERIES (TOPOGRAPHIC)


339
340
82°37'30"
28°00'

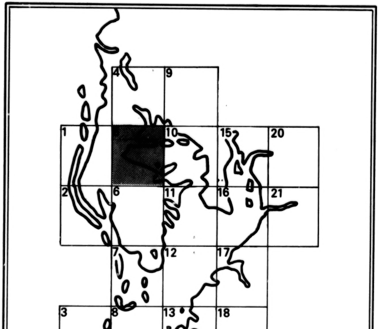
sa

MAP A5

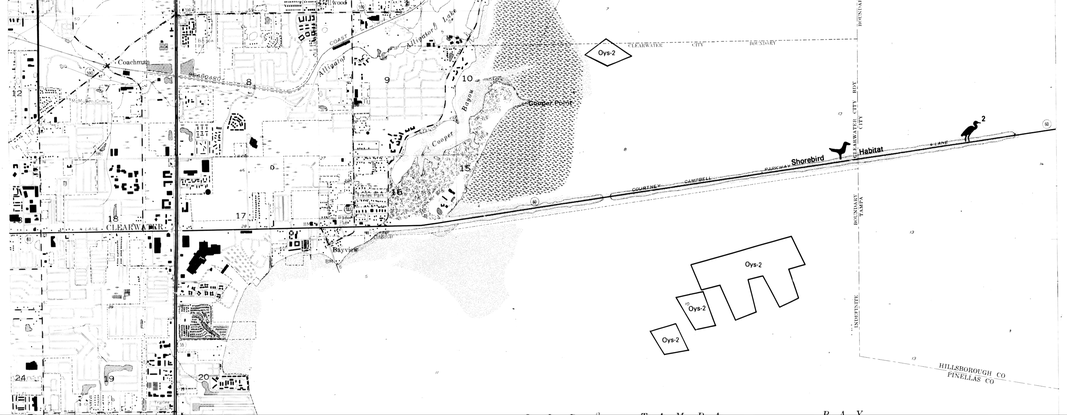
TAMPA BAY ENVIRONMENTAL ATLAS

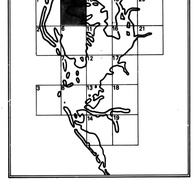
BIOLOGICAL RESOURCES

SAFETY HARBOR


1
2
3
4
6
7
8
9
10
11
12
13
15
16
17
18
20
21

A5





Scale 1:24,000

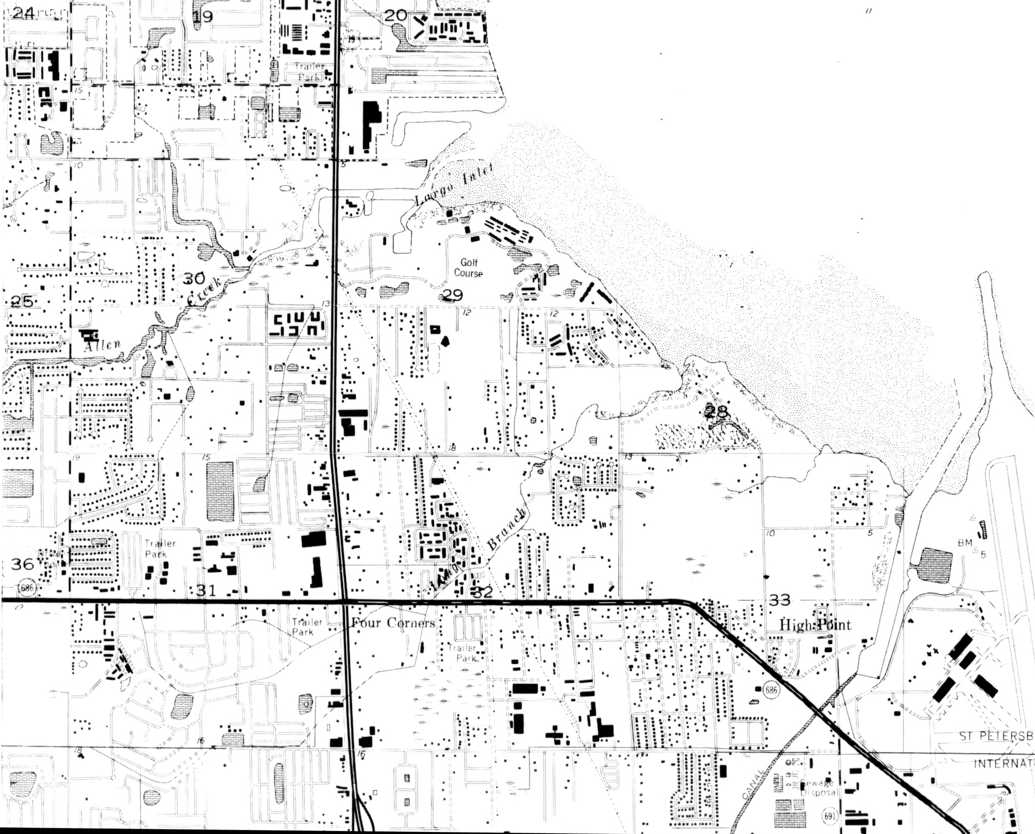
1984

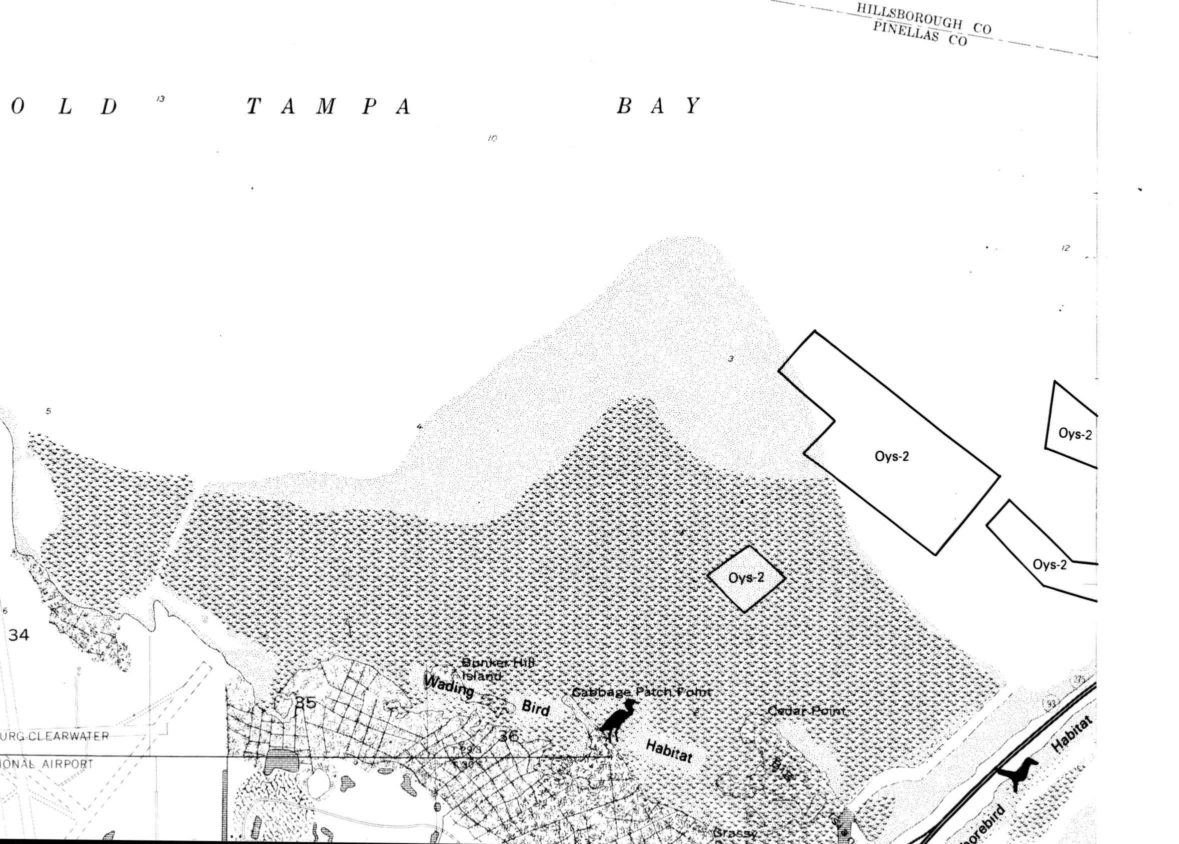
TOPICAL MAPS IN THIS ATLAS:
A. BIOLOGICAL RESOURCES
B. WATER RESOURCES

Produced by U.S. Fish and Wildlife Service
Projection and 1,000 meter grid, zone 17: Universal Transverse Mercator
10,000-foot grid ticks based on Florida coordinate system, east and west zones

Overlay material compiled in 1984 from latest available data obtained from Federal, State and Local government agencies and other sources.

There are no maps A19, A20, A21 due to a lack of data.


24
19
20
Trailer Park
Largo Inlet
Golf Course
29
30
Allen Creek
25
28
13
12
12
18
15
19
10
10
5
13
Long Branch
36
686
Trailer Park
31
32
33
Four Corners
Trailer Park
Trailer Park
High Point
BM 5
686
ST PETERSB
INTERNAT
CANAL
Sewage Disposal
691
16
16
18


HILLSBOROUGH CO
PINELLAS CO
OLD TAMPA BAY
13
10
12
3
4
5
6
Oys-2
Oys-2
Oys-2
Oys-2
34
35
36
Bunker Hill Island
Wading Bird Habitat
Cabbage Patch Point
Cedar Point
Big Island
Grassy
T 29 S
T 30 S
URG-CLEARWATER
IONAL AIRPORT
93
275
Shorebird Habitat

Overlay material compiled in 1984 from
latest available data obtained from
Federal, State and Local government
agencies and other sources.

There are no maps A19, A20, A21 due to a lack of data.

LEGEND

SHELLFISH HARVEST AREA
(Florida Dept. of Natural Resources)

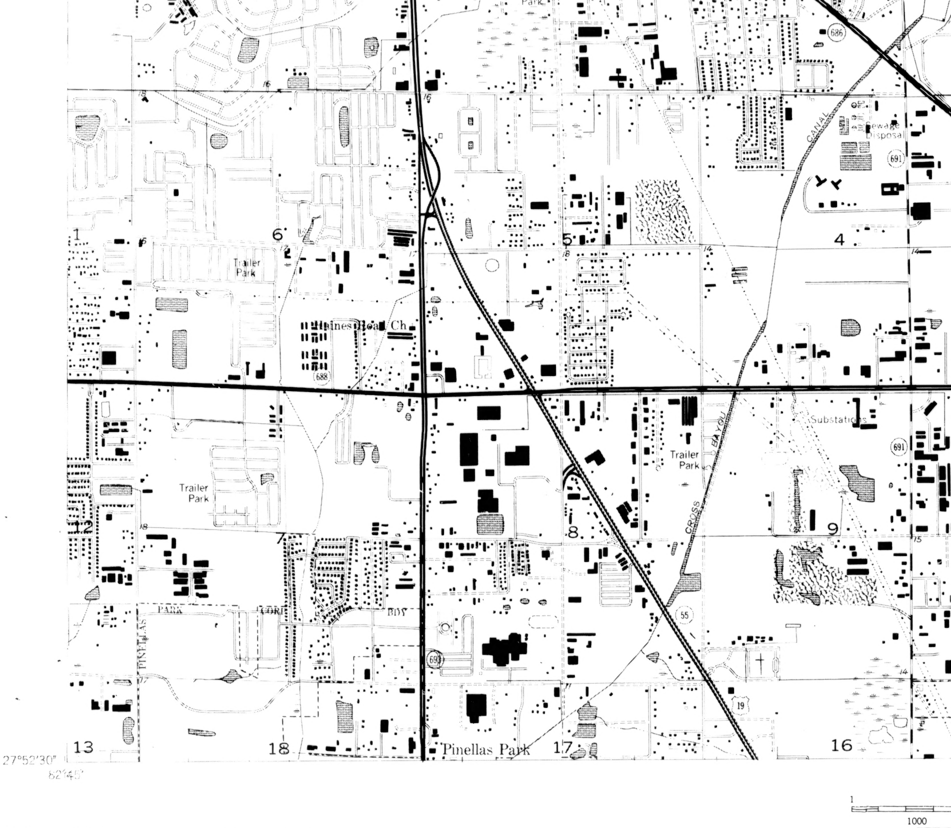
SHA	Shellfish Harvest Approved
SHCA	Shellfish Harvest Conditionally Approved

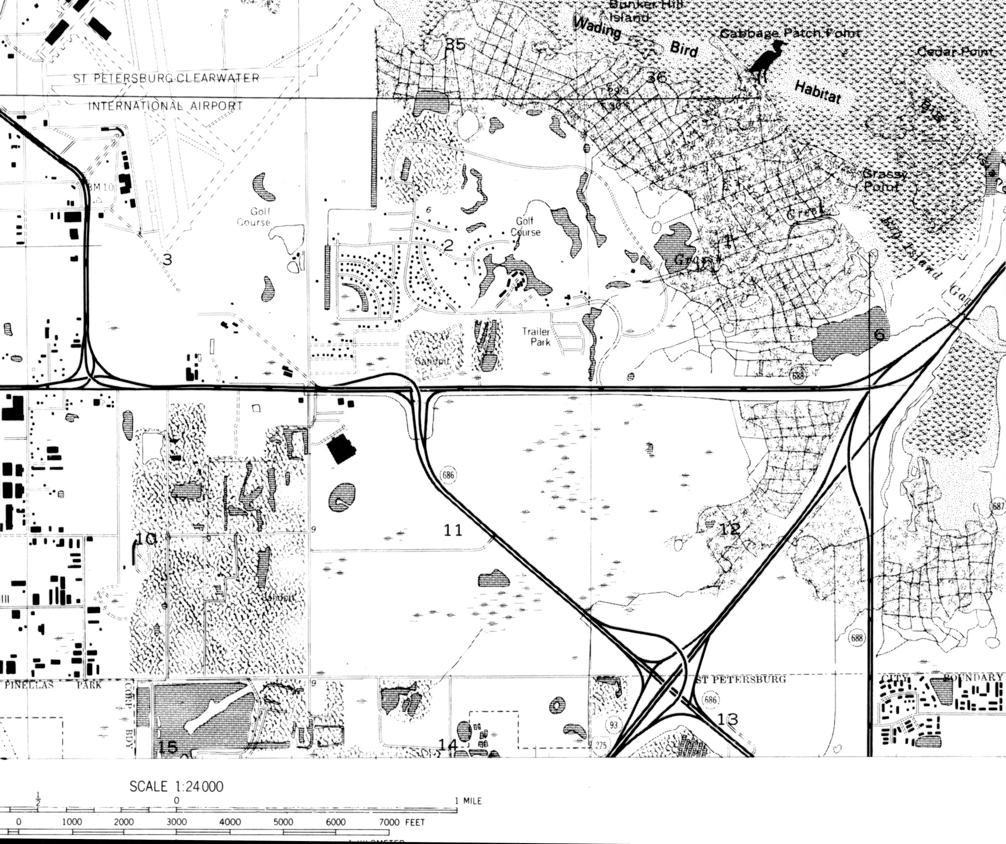
NOTE: Due to Dept. of Natural Resources (DNR) water quality standards all other estuarine areas are prohibited or unclassified as to shellfish harvest status and are officially unapproved. For further info. on status of harvest areas contact DNR - Shellfish Environmental Assessment Section.

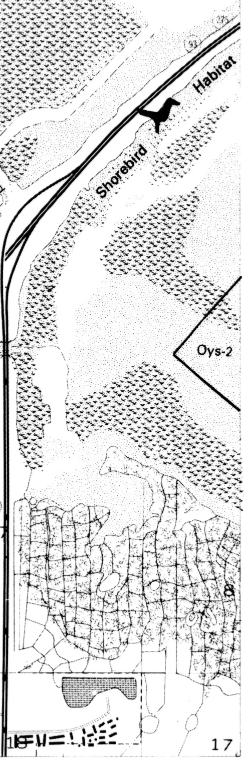
(Oys-1)	Public Oyster Bed
Oys-2	Private Oyster Bed (Lease)
CLAMS	Clam Bed

FINFISH SPAWNING, NURSERY AND HARVEST AREAS
(Recreational Hook and Line Fishing)

SPECIES #	FINFISH CATEGORY Common Name	SPAWNING													NURSERY AREA[1]	MAJOR NURSERY HABITATS							AREA OF ADULT ABUNDANCE[1]	MAJOR ADULT HABITATS						MIGRATION TYPE[2]
		LOCATION[1]	SEASON J		M		M		J		S		N			Seagrass	Mangrove	Saltmarsh	Beach	Coral Reef	Artificial Reef	Open Water		Seagrass	Mangrove	Beach	Coral Reef	Artificial Reef	Open Water	
	ESTUARINE DEPENDENT FISHES																													
1	Red Drum	C	■								■	■	■	■	E	●	●	●					E	●	●	●				2
2	Spotted Seatrout	E			■	■	■	■	■	■	■	■			E	●	●	●					E	●	●					2
3	Snook	C					■	■	■						E	●	●	●					E	●	●					2
4	Sheepshead	C			■	■	■								C	●							C-E			●		●		1


Park
686
Sewage
Disposal
CANAL
691
1
6
5
4
Trailer
Park
Haines Road Ch
688
Trailer
Park
Substations
BAYOU
CROSS
Trailer
Park
691
12
7
8
9
PARK
CORP
BDY
PINELLAS
55
693
19
13
18
Pinellas Park
17
16
27°52'30"
82°45'
1
1000


Bunker Hill Island
Wading Bird Habitat
Cabbage Patch Point
Cedar Point
35
36
T29S
T30S
ST PETERSBURG-CLEARWATER INTERNATIONAL AIRPORT
BM 10
Golf Course
Golf Course
6
2
3
Trailer Park
Sandpit
Grassy Point
Creek
Big Island
688
686
687
6
11
12
10
9
Sandpit
PINELLAS PARK
CORP BDY
ST PETERSBURG
CITY BOUNDARY
13
14
15
93
275
SCALE 1:24 000
½
0
1 MILE
0
1000
2000
3000
4000
5000
6000
7000 FEET


Shorebird
Habitat
Oys-2
93
275
8
18
17
27°52'30"
82°37'30"

SPECIES #	FINFISH	SPAWNING													NURSERY AREA[1]	MAJOR NURSERY HABITATS							AREA OF ADULT ABUNDANCE[1]	MAJOR ADULT HABITATS						MIGRATION TYPE[2]
	CATEGORY Common Name	LOCATION[1]	SEASON J		M		M		J		S		N			Seagrass	Mangrove	Saltmarsh	Beach	Coral Reef	Artificial Reef	Open Water		Seagrass	Mangrove	Beach	Coral Reef	Artificial Reef	Open Water	
	ESTUARINE DEPENDENT FISHES																													
1	Red Drum	C	▬	▬							▬	▬	▬	▬	E	●	●	●					E	●	●	●				2
2	Spotted Seatrout	E			▬	▬	▬	▬	▬	▬	▬	▬			E	●	●	●					E	●	●					2
3	Snook	C					▬	▬	▬						E	●	●	●					E	●	●					2
4	Sheepshead	C			▬	▬	▬								C	●							C-E			●		●		1
5	Southern Flounder	C									▬	▬	▬	▬	C-E	●			●				C-E	●		●				2
6	Florida Pompano	CS				▬	▬	▬	▬	▬	▬	▬			C-E				●				C-E			●			●	3
7	Striped Mullet	CS	▬									▬	▬	▬	E	●	●	●					E	●	●	●				3
8	Gulf Menhaden	C	▬	▬	▬								▬	▬	E	●	●	●					C-E	●		●			●	3
9	Spanish Sardine	C						▬	▬	▬	▬				E	●	●	●					C-E	●		●			●	3
10	Black Drum	C	▬	▬	▬	▬	▬						▬	▬	E	●	●	●					E	●	●	●				1
	REEF FISHES																													
11	Red Grouper	CS			▬	▬	▬	▬							CS-C	●				●	●		CS				●	●		2
12	Jewfish	CS							▬	▬					CS-C	●				●	●		CS-C				●	●		2
13	Gag Grouper	CS	▬	▬	▬	▬								▬	CS-C	●				●	●		CS-C				●	●		2
14	Scamp	CS			▬	▬									CS	●				●	●		CS				●	●		2
15	Red Snapper	CS							▬	▬	▬	▬			CS-C	●				●	●		CS-C				●	●		2
16	Mangrove Snapper	CS				▬	▬	▬	▬	▬					C-E	●	●						C-E				●	●		2
	COASTAL PELAGIC FISHES																													
17	King Mackerel	OCS					▬	▬	▬	▬	▬				CS							●	CS-C				●	●	●	4
18	Spanish Mackerel	CS					▬	▬	▬	▬	▬				CS							●	CS-C				●	●	●	4

[1] KEY:
E — Estuarine
C — Coastal
CS — Continental Shelf
OCS — Outer Continental Shelf

[2] MIGRATION TYPE:
1 — Residentially Restricted
2 — Random Residential Range
3 — Restricted Migration
4 — Extensive Migration

COLONIAL BIRD NESTING SITE *
Number appearing with symbol indicates colony sites. Colony sites and species - composition data are included in the narrative.

Shorebird

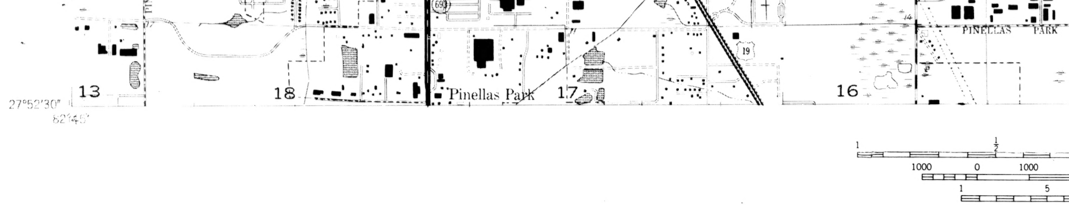
Wading Bird

Brown Pelican

WEST INDIAN MANATEE HABITAT

MICROCOPY RESOLUTION TEST CHART
NBS - 1010a
(ANSI and ISO TEST CHART No. 2)

1.0
1.1
2.8
4.5
5.0
5.6
6.3



THE TAMPA BAY ENVIRONMENTAL ATLAS WAS PRODUCED BY THE U.S. FISH AND WILDLIFE SERVICE, DIVISION OF BIOLOGICAL SERVICES NATIONAL COASTAL ECOSYSTEMS TEAM (FWS/OBS) FOR COASTAL PLANNERS, DECISION MAKERS AND THE GENERAL PUBLIC, TO DETERMINE AND EVALUATE CHANGE AND TO RESOLVE CONFLICTS AMONG LAND USES, FISH AND WILDLIFE REQUIREMENTS AND THE MAINTENANCE OF ECOLOGICAL DIVERSITY. THE STUDY AREA INCLUDES A MAJOR PORTION OF THE COASTAL COUNTIES OF PINELLAS, HILLSBOROUGH, MANATEE, AND A SMALL PORTION OF SARASOTA. THERE IS NO ATTEMPT, IN THE DESIGN OR PRODUCTS OF THIS STUDY, TO DEFINE THE LIMITS OF PROPRIETARY JURISDICTION OF ANY FEDERAL STATE, OR LOCAL GOVERNMENT TO ESTABLISH THE GEOGRAPHICAL SCOPE OF THE REGULATORY PROGRAMS OF GOVERNMENT AGENCIES.

THIS MAP HAS BEEN COMPILED FROM A VARIETY OF SOURCE MATERIALS INCLUDING MAPS, AERIAL PHOTOS, AND REPORTS. SINCE MANY SOURCES CONTAINED GENERALIZED LOCATIONS OF RESOURCES AND OTHER MAPPED FEATURES, THE USER SHOULD NOT RELY ON THESE MAPS FOR PRECISE MEASUREMENTS OF DISTANCES OR AREAS.

PRIMARY SOURCES OF MAPPED INFORMATION:

SHELLFISH HARVEST AREAS: Shellfish Harvest Area Maps, Dept. of Natural Resources, 1982.

PUBLIC & PRIVATE OYSTER BEDS: Cooperative Gulf of Mexico Estuarine Inventory and Study, Florida, McNulty, Lindall and Sykes, 1972.

CLAMS: Personal Communication, Discussion of Distribution Clams in Tampa Bay and Adjacent Brackish Waters, Mr. L. Tracy Three T's Clam Company, 1983 Mike Sprague, Draft Maps, Department of Natural Resources, 1984

SCALLOP BEDS: Personal Communication, Mr Bill Lyons Dept. of Natural Resources, Marine Research Laboratory, 1982

FINFISH SPAWNING, NURSERY & HARVEST AREAS: Florida's Fishing Grounds, Moe, 1970.

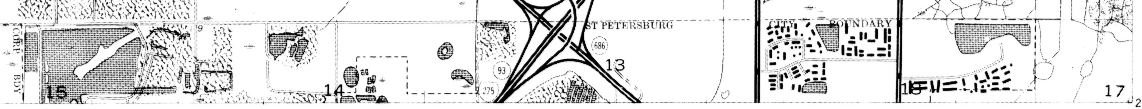
BIRD NESTING SITES: Florida Atlas of Breeding Sites for Herons and Their Allies: 1976-78, Nesbitt, S.A., Ogden, J.C., Kale II, H.W., et.al. U.S. Fish and Wildlife Service, 1982. Personal Communication, Maps and Data, Dr H.W. Kale II, Florida Audubon Society, 1982

MANATEE HABITAT: Boaters guide to Manatees, the gentle giants, Florida Marine Patrol, 1980.

SEAGRASS BEDS: Tampa Bay Seagrass Maps, 1:10,000 and 1:24,000 Scales, Mangrove Systems, Inc 1980 National Wetlands Inventory Maps, 1:24,000 Scale, U.S. Fish and Wildlife Service, 1983.

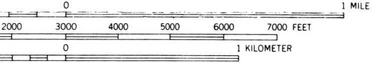
ARTIFICAL REEFS: Computer Printout of Florida Artifical Reefs, U.S. Army Corps of Engineers, 1981. Recreational Use Reefs in Florida: Artifical and Natural, Florida Sea Grant Program, 1979.

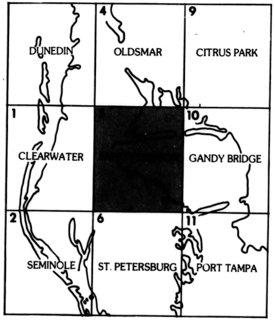
FOR COMPLETE REFERENCE SEE MAP NARRATIVE



27°52'
82°37'30"

SCALE 1:24 000





30″

Shorebird

Wading Bird

Brown Pelican

WEST INDIAN MANATEE HABITAT

STATE MANATEE SANCTUARY

▨ SEAGRASS BEDS

■ ARTIFICAL REEF*
(Permitted by Florida Dept. of Environmental Regulation)
Numbers next to reefs refer to composition data in narrative

*Symbols appearing with numbers are described more fully in the narrative.

MICROFILMED FROM
BEST AVAILABLE COPY

MICROCOPY RESOLUTION TEST CHART
NBS - 1010a
(ANSI and ISO TEST CHART No. 2)
4.5 5.0 5.6 6.3 7.1 8.0 2.8 3.2 3.6 4.0 2.5 2.2 2.0 1.8

10
11
12.5
14
16
FREE

10
11
12.5
14
16
FREE